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ABSTRACT

Designed to give the teacher a capsule explanation of how the system works, this guide introduces the Mountain-Plains instructor to specific curriculum materials and provides examples of the basic instruments used in the Mountain-Plains program, a residential, family-based education program developed to improve the economic potential and lifestyle of selected student families in a six-state area. (The instructional system contains guides, learning activity packages, and record sheets which allow the student to proceed through the system with a minimum of instructor assistance.) Specific examples and instructions for the use of the following materials are included in this guide: a curriculum component flow chart, student progress record, student work plan, learning experience guide, learning activity package, student flow diagram, and curriculum monitoring forms. Guidelines for interpreting the Mountain-Plains file code and for utilizing tests are also included. An orientation guide for the instructors (CE 014 652) and a sample curriculum unit (CE 014 647) are also available. (Additional Mountain-Plains curriculum materials, including twenty-two instructional units, are available for on-site inspection at the Research Library at the National Center for Research in Vocational Education at Ohio State University.) (BM)

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A REGIONAL PROGRAM IN
COMPREHENSIVE FAMILY EDUCATION

ED150365

MOUNTAIN-PLAINS CURRICULUM PACKAGE

TEACHER GUIDE

BOX 3078 · GLASGOW AFB, MONTANA 59231

MOUNTAIN-PLAINS EDUCATION ECONOMIC DEVELOPMENT PROGRAM INC.

MOUNTAIN-PLAINS CURRICULUM PACKAGE

Mountain-Plains is a residential career education program funded through the National Institute of Education for a five year cycle of research and development under the designation "Career Education Model IV". The material presented herein was performed pursuant to Contract NE-C-00-3-0298. The opinions expressed do not necessarily reflect the position or policy of the National Institute of Education and no official endorsement by that agency should be inferred.

Technical Support Division

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July, 1976

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INTRODUCTION

Mountain-Plains is committed to the idea that staff as well as students are responsible for student progress and change. This suggests a team approach leading to a change of behavior on the part of the student. The Mountain-Plains system provides this approach, which, more specifically, is to:

A. Define minimum levels of acceptable performance, based upon program goals, for both families and students over a range of program objectives.

B. Determine for each student and family entering the program their deficiencies from these pre-set minimum levels and therefore what we are trying to accomplish with each of them.

C. Schedule and apply the program in such manner as to treat and attempt to eliminate these specific deficiencies for each student and family.

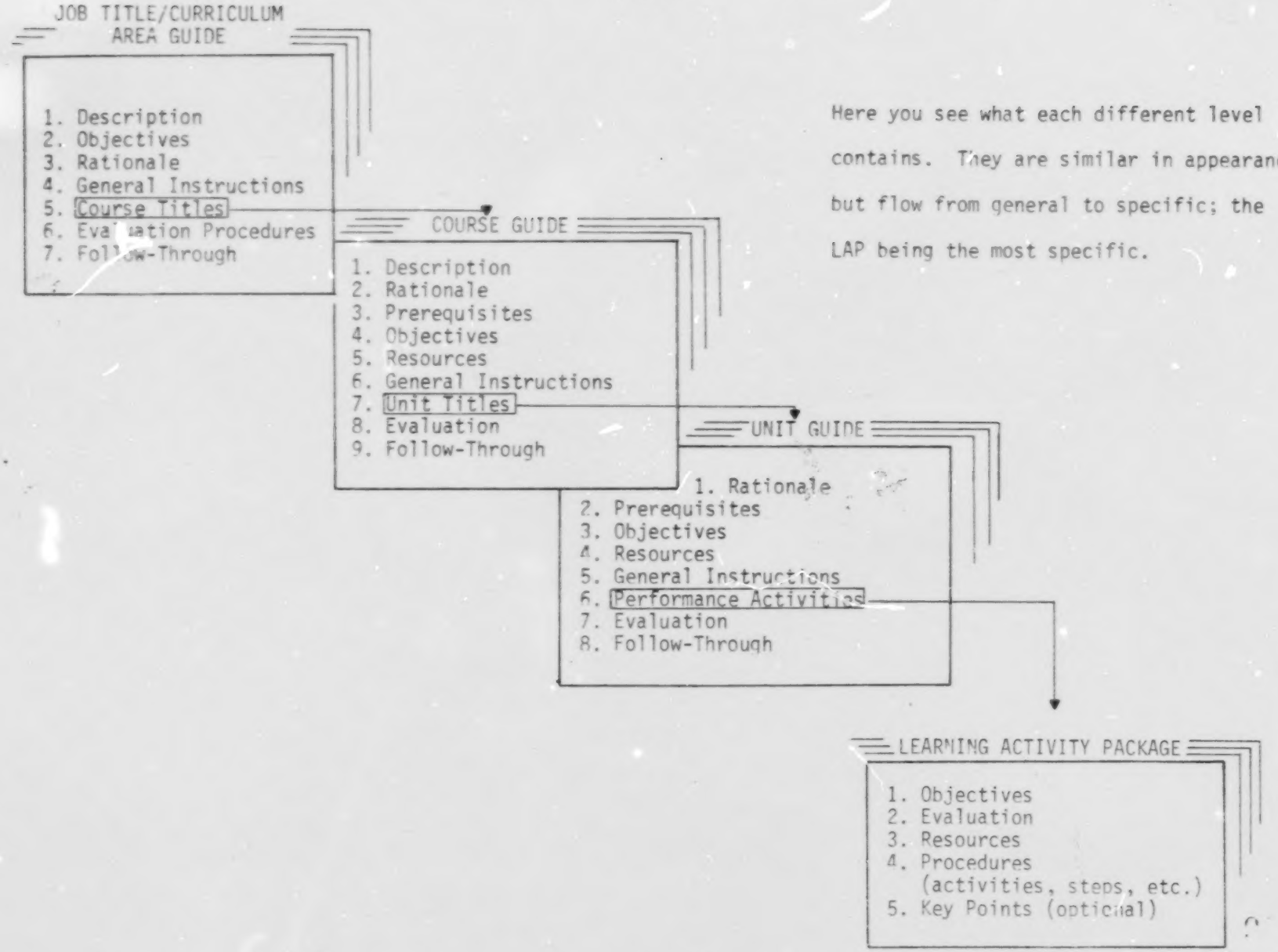
This Teachers' Guide is one of many devices provided by the Technical Support division to ensure that the System is adhered to. It introduces the instructor to specific documents, explains their use, and provides examples of these basic instruments of the Learning System.

PURPOSE

This Guide is designed to give the teacher a capsule explanation of how the system works. Generally, the system contains guides, learning activity packages and record sheets, developed and used in a manner which allows the student to proceed through the system with a minimum of instructor assistance.

At Mountain-Plains, it has been found that when the system is used as designed, students interact with one another far more than they do with an instructor. There are some definite advantages to this. One, is that the instructor is released for private consultations with students. Another, is that instructors can manage the curriculum, diagnosing learning difficulties and prescribing sources of needed information. Student manipulation and coercion are not necessary to provide a creative learning environment. Instructional and clerical aides provide assistance to the instructor.

CURRICULUM COMPONENT FLOW CHART
(General To Specific)



Here you see what each different level contains. They are similar in appearance but flow from general to specific; the LAP being the most specific.

STUDENT PROGRESS RECORD

Description and Purpose

The Student Progress Record (SPR) is a listing in outline form of component titles for courses, units and LAPs for each Curriculum Area. There is an SPR for each authorized career job title. An SPR for support areas to job titles also exists. The SPR is used to record data not otherwise available. This data is used for administration, which includes student progress monitoring, and for baseline data for research and evaluation purposes, such as curriculum validation.

Specific Procedures for Instructors Use

Pre and Post and Performance tests are entered on the form in the spaces provided under the course and unit title. The sections of importance to the instructors are the columns to the right of the title. These columns are for recording the times spent in the LAPs. The student keeps track of his own time but when a LAP is completed, the instructor checks the students entries and initials the column provided to verify the student's entry.

The time spent in a curriculum component is defined as:

1. The time spent getting the material out.

2. Study and/or work time including tests (?).

3. Time spent putting away materials.

When the SPR is received in the instructional areas, it should have the student's name and number, pre-test date and course pre-test scores clearly entered. The curriculum elements prevalidated by the course pre-test are indicated by a "V" following the score for that component.

In the instructional area the instructor is responsible for the following entries;

1. The instructor enters the date the student began attending the area in the entry date space.

2. The instructor ensures that for each curriculum component the student records:
   a. date component started.
   b. date component completed.
   c. time in hours, to the .5 hour, that the student felt he spent on the component is recorded daily.

3. Include for each LAP or test.
   a. Time for getting materials out.
   b. Study and/or work time.
   c. Tear-down and put-away time.
   d. Time spent on take home work.

4. Do not include time that does not contribute to mastery of the LAP material.
   a. General shop clean-ups.
   b. Coffee breaks and wash up.
   c. Other non-productive tasks.

5. The instructor initials each curriculum component to signify that the above data is entered and that the curriculum component has been validated by the student.

6. The instructor is to enter all instructor given unit pre and post test scores and performance test results (pass or fail) in the spaces provided in the Component Title column of the SPR. In the event a unit cognitive test is failed, enter the scores as always, leaving room for subsequent entries upon retakes. There will be no more than a total of three entries. Treat performance test entries similarly, using "F" or "P" rather than scores.

7. When a block of review time is used by the student that does not fit into LAPs or units, write "review" immediately to the right of the next higher level title (such as unit or course) and have the student enter the review time in the "time spent" column.

8. The instructor monitors to assure that the student records his time daily, insuring accurate and current records. (Note: it is suggested that these daily entries be made on a worksheet copy of the SPR till each component is completed and then transferred to the official SPR. The time may also be recorded on the LAPs or other method preferred by the instructor. The important thing is to maintain good records.)

9. Unit pretests are given only at a student's request and when it appears that he may be capable of prevalidation of the unit.

STUDENT PROGRESS RECORD

Name ① Number

Curriculum Area 37 AUTOMOTIVE

JOB TITLE: Tune-up and Engine Repair

Entry Date

Pretest Date ②

Post Test Date ⑫

Course	Unit	LAP	COMPONENT TITLES	Time Spent in Curric. Compon.	Date Started	Date Completed	Instructor's Initials	Pretest	Post Test
		.02	Battery Load Test						
		.03	Testing Cranking Voltage						
		.04	Testing Ignition Coil						
		.05	Testing Secondary Cable Resistance						
.09			Engine Repair						
			Pretest ⑬ Post Test ⑭ Perf. Test ⑮						
	.01		Fundamentals of 4-Cycle Engines	⑥	④	⑤	⑦	③	⑪
			Pretest Post Test Perf. Test						
		.01	Fundamentals of 4-Cycle Engines						
	.02		Engine Construction						
			Pretest ⑧ Post Test ⑨ Perf. Test ⑩						
		.01	Fundamentals of Engine Block						
		.02	Engine Block Construction						
	.03		Valve Train						
			Pretest Post Test Perf. Test						
		.01	Fundamentals of Engine Block						
		.02	Inspecting Cylinder Head						
		.03	Overhaul Over-Head Valve Head						
		.04	Overhaul Over-Head Cam Head						
	.04		Engine Block						
			Pretest Post Test Perf. Test						
		.01	Overhaul Engine Block						
		.02	Cam Shaft						
		.03	Crank Shaft and Bearings						
		.04	Pistons						
		.05	Rods						
		.06	Timing Gears and Chains						
	.05		Lubricating Systems						
			Pretest Post Test Perf. Test						
		.01	Fundamentals of Oil Pumps						
		.02	Testing Oil Pump						
		.03	Replacing Oil Pump						
.12			Parts and Accessories						
			Pretest Post Test Perf. Test						
	.03		Cleaning Parts and Work Area						
			Pretest Post Test Perf. Test						

When the SPR arrives in the Instructional Area it should contain or be filled our as follows:

TC *	①	Student Name and Number
TC	②	Job Title Pretest Date
TC	③	Course Pretest Results (Followed by V for elements prevalidated)
S	④	Date Curriculum Element Started
S	⑤	Date Curriculum Element Completed
S	⑥	Time Spent on Curriculum Element
I	⑦	Instructor's Initials
I	⑧	Unit Pretest Results Only If Element Challenged
I	⑨	Unit Post Test Results
I	⑩	Performance Test Results (P or F)
TC	⑪	Course Post Test Results
TC	⑫	Job Title Post Test Date
TC	⑬	Total Course Pretest Score
TC	⑭	Total Course Post Test Score
I	⑮	Total Course Performance Test Results

Responsibility For Entry

*TC = Test Center
S = Student
I = Instructor

STUDENT WORK PLAN

Description and Purpose

There is a Student Work Plan which lists the Student Terminal Performance Objectives for:

1. Each Family Core Curriculum area.
2. Both basic and advanced Math and Communication Skills.
3. Each job title in the career areas (a SWP also exists for support areas).

The SWP, printed on 3-to 5-part carbonless paper, has provision for course pre and post scores by STPOs and lists curriculum to the unit level to support each STPO. At the unit level the SWP indicates normative student time in hours and has provisions for recording:

1. Prevalidation of units by the initial course pre-tests.
2. Student recorded time from the SPR (Student Progress Record).

Finally, the SWP provides for determining the student's budgeted time for each of his curriculum areas.

The SWP is supported by the SPR and serves as a student data form and data transmittal document. It is used in student planwriting, student progress monitoring, research and permanent records.

How it Fits into the System

The SWP originates in the Test Center along with the SPR when the student is pre-tested for each of his curriculum areas. On it the Test Center records:

1. Student's name.
2. Pre-test date.
3. Course pre-test score by STPOs and total score.
4. Units prevalidated.

From the Test Center it goes with the SPR, by staff delivery for FCC and student hand carried for career areas, to the Data Monitor Office. (One copy of SWP for Foundation Education.) There it is checked for completeness, quality, logged, percent scores computed and a copy retained for the student folder. The retained copies are used to write the student's

plan and for initial computer loading while the remaining copies are again staff delivered to the FCC areas and student hand carried to the career areas. (Staff delivered directly from the Test Center to Foundation Education.) For the FCC areas, the SWP is filled out from the SPR by instructors and returned with the SPR to the Data Monitor Office by the student when he completes or ceases to attend the area. It is staff delivered for deserting students. In Foundation Education the student is pre-tested in the area. The SWP and inidividual student profile are completed by instructors and hand carried by the student to the scheduling aide.

In the career area, the SWP is used as a student progress transmittal document (information entered by instructors from the SPR), including six week progress reviews and special reviews as needed. As students complete each career curriculum area, the instructor will call the advisor. The student will be instructed to hand carry his/her SWP and SPR to the Data Center. A special schedule will be prepared and the student will then go to the Test Center with his/her SWP and SPR for cognitive post testing. The Test Center informs the student when to pick up the SWP and SPR to hand carry to the Data Monitor Office, for computing loading, research and permanent records. Again, if a student deserts, the Registrar notifies the Education Services Division and the SWP is staff delivered to the Data Monitor Office.

Specific Procedure for Instructor Use

When the SWP is received in the instructional areas, it should have the student's name, pre-test date, pre-test score by STPOs and a "V" in the parentheses (V) for units prevalidated.

In the instructional areas the instructor is responsible for the following entries:

1. Entry date when the student begins the area.

2. Progress data at designated review dates (dates to be provided by the Data Supervisor) which included:

   a. For units completed, the student recorded time inside the parentheses, which is the sum of the times recorded on the SPR and LAPs and tests in the unit.
   b. For incomplete units, the student recorded time recorded to the immediate right of the parentheses. This time is the sum of all student recorded time from the SPR for LAPs and tests within the unit. This time is to be current (refer SPR section). A copy of the updated SWP is then forwarded to the Data Monitor.

3. Exit date when the student ceases attending the area.

When the student validates or ceases to attend the area, the instructor will:

1. Notify the advisor aide by phone.

2. As students complete each career curriculum area, the instructor will call the advisor. The student will be instructed to hand carry his/her SWP and SPR to the Data Center. A special schedule will be prepared and the student will then go to the Test Center with his/her SWP and SPR for cognitive post testing.

3. Have the student hand carry the SWP and SPR to the scheduling aide.

4. If the student is not available for the above, the instructor will forward the updated SWP and SPR to the Data Monitor Office as soon as notified by the Registrar through the Education Services Division.

Procedure for Instructors Assisting Plan Change

When a student has a plan change, the existing information concerning his major area is dropped to the bottom of the printout. The information concerning his new major area is then loaded on the computer. From that time on, the 6-week review printout will show only the new major area, and it will be updated for the period of time since the plan change. (Note: No plan changes will be made without approval of the student's advisor--see Student Flow-Through Manual for approved procedure.)

To facilitate the Data Center in handling this information accurately, the following procedures apply:

1. If a new curriculum area is being entered (example - Food Service to Automotive).

   The SWP and SPR for the student's existing plan will be completed to date and hand carried by the student to the Data Center. On receipt of the SWP and SPR, the student will be scheduled to the Test Center for pre-testing according to present procedure. The Test Center fills out new SWPs and SPRs which are hand carried to the Data Monitor, processed and used to write the new plan. (Note: This procedure is now in operation.)

2. If a student remains in the curriculum area but changes job titles (example--Clerk Stenographer to Clerk) or if a student changes curriculum areas but still requires the major class for support (example--Radio and TV to Appliance Serviceman).

There is usually no need for further pre-testing. The instructor will fill out a new SWP and SPR on the appropriate forms indicating units previously pre-validated and the units the student has already completed to date as pre-validations. The new forms, along with the current (up-to-date) SWP and SPR for the existing plan, will be hand carried by the students to the Data Monitor's office for processing and plan making. These new forms will be returned to the areas the same as forms for initial plans.

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STUDENT NUMBER (1)

STUDENT WORK PLAN

Name (2)

Rater (3)

Date (Entry) (4) (Exit)

KEY FOR FILLING OUT RIGHT-HAND PARENTHESES

( ) Unit prevalidated on pretest indicated by entering a "V" in the parentheses following unit code

( ) For Completed Units enter total hours from SPR "Time Spent ..." in the parentheses

( ) For Incomplete Units enter total hours for completed LAP's from from SPH "Time Spent ..." at the immediate right of the parentheses

Instructional or Curriculum Area: 27 PROFESSIONAL SALESPERSON	Comprehensive Written Test PRE	Comprehensive Written Test POST	Performance Check List PRE	Performance Check List POST	Attitude Check List PRE	Attitude Check List POST	Other: Specify PRE	Other: Specify POST	COURSE UNITS NEEDED	Est. Time / Act. Time
Objectives										
Identify the fundamental concepts and practices of good salesmanship and apply them in a simulated sales situation. (5)									(24) 07.01 ( ) (15) 07.02 ( )	(9)
Identify the principles and practices used in sales-supportive services provided by wholesale and retail businesses. (5) 3									(5) 08.01 ( ) (10) 08.02 ( ) (8)	(9)
Identify advanced concepts and practices of good salesmanship and apply them in a simulated sales situation. (5) 35									(24) 09.01 ( ) (42) 09.02 ( ) (15) 09.03 ( ) (15) 09.04 ( )	(9)
Plan and prepare advertisements using principles and practices for advertising, sales promotion, and public relations. (5) 60									(23) 10.01 ( ) (5) 10.02 ( )	(9)
40										
TOTALS (6)									JOB TITLE HOURS 359 ADJUSTED JTH ADJUSTED SUPPORT HOURS TOTAL ADJUSTED HOURS (11)	Total Est. Time (10) Total Act. Time

When the SWP arrives in the Instructional Area it should contain or be filled out as follows:

TC	(1)	Student Number
TC	(2)	Student Name
I	(3)	Instructor's Name
I	(4)	Entry Date
TC	(5)	Course Pretest Scores by STPO
TC	(6)	Course Test Score Total
DM	(7)	Course Test Score %
TC	(8)	Units Prevalidated by Course Test (V)
DM	(9)	Estimated Time by STPO
DM	(10)	Total Estimated Time
A	(11)	Total Adjusted Hours

Responsibility For Entry

TC = Test Center
I = Instructor
DM = Data Monitor Office
A = Advisor

16

Actual Score / Possible Test Score

Score Necessary to Prevalidate / Possible Test Score

PRETEST	POST TEST
(7) %	%

FOR DATA MONITOR USE

Date updated

11

17

STUDENT NUMBER _____

STUDENT WORK PLAN

Name _____

Rater _____

Date *(Entry)* _____ *(Exit)* _____

KEY FOR FILLING OUT RIGHT HAND PARENTHESES

(V) Unit prevalidated on pretest indicated by entering a "V" in the parentheses following unit code

( ) For Completed Units enter total hours from SPR "Time Spent . . ." in the parentheses

( ) For Incomplete Units enter total hours for completed LAP's from from SPR "Time Spent . . ." at the immediate right of the parenthesis

Instructional or Curriculum Area	Comprehensive Written Test PRE	Comprehensive Written Test POST	Performance Check List PRE	Performance Check List POST	Attitude Check List PRE	Attitude Check List POST	Other Specify PRE	Other Specify POST	COURSE UNITS NEEDED	Est. Time / Act. Time
37 TRANSMISSION MECHANIC										
Objectives: Recognize and use safety equipment, accident prevention techniques, and safety procedures involved with automobile repair and servicing.										
Recognize proper use and care of tools and equipment used for automotive diagnosis, repair and servicing.	12 / 15	12 / 15							(10) 01.01 (1)	
Use automotive manuals and work orders. Effectively wash automotive parts and clean the service area.	244 / 305	244 / 305							(40) 10.01 ( ) (25) 10.02 ( ) (40) 10.03 ( ) (45) 10.04 ( ) (150) 10.05 ( ) (175) 10.06 ( ) (10) 10.07 ( ) (40) 10.08 ( ) (5) 12.01 ( ) (5) 12.02 ( ) (10) 12.03 ( ) (20) 13.01 ( )	
Inspect, service and repair automotive brake systems.										
Perform maintenance and repair of automotive suspension systems.	12 / 15	12 / 15							(5) 02.01 ( ) (5) 02.02 ( ) (5) 02.03 ( )	
TOTALS	335	335		52					JOB TITLE HOURS 590 ADJUSTED JTH _____ ADJUSTED SUPPORT HOURS _____ TOTAL ADJUSTED HOURS _____	Total Est. Time / Total Act. Time

PROGRESS REPORTING ENTRIES TO BE MADE BY INSTRUCTORS

I (1) For Completed Units - Total the time recorded by the student for each LAP in the Unit and enter inside the parenthesis following the Unit Number on the SWP. (X)

I (2) For Units Started But Not Completed - Total all the Student Recorded Time for LAPs in the Unit and record to the right of the parenthesis for that Unit. ( ) X

I (3) Enter the Date of the Update on the lower right corner of the SWP near where it says "FOR PLANNER USE".

Responsibility For Entry

I = Instructor

KEY: 18

Actual Score / Possible Test Score
Score Necessary to Prevalidate / Possible Test Score

PRETEST	POST TEST
%	%

FOR DATA MONITOR USE

(3) Date updated _____

12

19

STUDENT NUMBER _____

Name _____

Rater _____

Date (Entry)_____(Exit) (2)

STUDENT WORK PLAN

KEY FOR FILLING OUT RIGHT HAND PARENTHESES

(V) Unit prevalidated on pretest indicated by entering a "V" in the parentheses following unit code.

( ) For Completed Units enter total hours from SPR "Time Spent ..." in the parentheses.

( ) For Incomplete Units enter total hours for completed LAP's from from SPR "Time Spent ..." at the immediate right of the parenthesis

Instructional or Curriculum Area: 27 PROFESSIONAL SALESPERSON	Comprehensive Written Test PRE	Comprehensive Written Test POST	Performance Check List PRE	Performance Check List POST	Attitude Check List PRE	Attitude Check List POST	Other Specify PRE	Other Specify POST	COURSE UNITS NEEDED	Est. Time / Act. Time
Objectives: Identify the fundamental concepts and practices of good salesmanship and apply them in a simulated sales situation.	3								(24) 07.01 ( ) (15) 07.02 ( )	
Identify the principles and practices used in sales-supportive services provided by wholesale and retail businesses.	35								(5) 08.01 ( ) (10) 08.02 ( )	
Identify advanced concepts and practices of good salesmanship and apply them in a simulated sales situation.	60								(24) 09.01 ( ) (42) 09.02 ( ) (15) 09.03 ( ) (15) 09.04 ( )	
Plan and prepare advertisements using principles and practices for advertising, sales promotion, and public relations.	40								(23) 10.01 ( ) (5) 10.02 ( )	
TOTALS									JOB TITLE HOURS 359 ADJUSTED JTH ADJUSTED SUPPORT HOURS TOTAL ADJUSTED HOURS	Total Est. Time Total Act. Time

FINAL ENTRIES TO BE MADE BY INSTRUCTORS WHEN THE STUDENT CEASES TO ATTEND AN AREA

1 (1) Transfer all student recorded time from the SPR to the SWP.

1 (2) Record date student ceased attending an area.

Responsibility For Entry

1 = Instructor

(1)

FOR PLANNER USE

KEY: 20 Actual Score / Possible Test Score

Score Necessary to Prevalidate / Possible Test Score

PRETEST	% Change	POST TEST	% Change

FOR DATA MONITOR USE

LEARNING EXPERIENCE GUIDES (LEGs)

These are designed to give the viewer a capsule look at the contents of the job title, course, or unit he is viewing. A student or instructor can see from the Course LEG what is contained in any course without detailed examination of course material.

LEGs may be used at job title, course or unit levels in the curriculum sequence; it is suggested that the author make the LEG readable by students as well as instructors where practical. LEGs are also one of the best sources of information for persons from other schools and institutions to quickly determine the contents and usefulness of these curriculum products.

JOB TITLE

LEARNING EXPERIENCE GUIDE

Mountain-Plains Job Title Learning Experience Guides (LEGs) describe the behavior expected of the student upon his leaving the system, and give general descriptions of procedures and expectations of the student while undergoing instruction in his chosen Job Title.

Included in the Job Title LEG are:

a. A description of the program activities necessary to develop skills needed to enter the job title occupational field.

b. Performance objectives.

c. General procedural instructions.

d. A list of curriculum components (courses, units, LAPs) necessary to complete the job title.

e. A list of resources (texts, films, etc.) necessary.

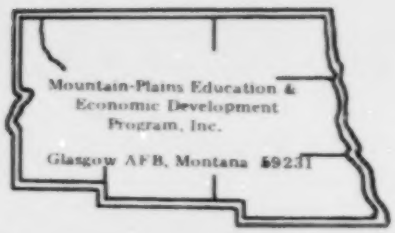
f. A description of evaluation procedures during the course of the Job Title.

g. Directions on what to do after reading the Job Title LEG.

A sample Job Title LEG follows.

File Code: 246.00.00.00.A1-1

Date Published: 7/14/76



Learning Experience Guide

JOB TITLE: BOOKKEEPER

DESCRIPTION:

The program for preparing a Bookkeeper includes those learning activities that will provide information, procedures and practice needed to perform as an entry level Bookkeeper.

Program activities include development of the following knowledges and skills:

1. Apply basic accounting principles in analyzing, classifying, recording and summarizing given financial data for a specific accounting system.
2. Apply the techniques of effective communications to business writing. Operate accurately and efficiently the ten-key and full-keyboard adding machines and the printing and electronic calculators for various mathematical calculations.
3. Apply the alphabetic method to the filing operations of indexing, and sorting of cards.
4. Keypunch cards according to a set of instructions.
5. Accurately type assignments to specified standards.
6. Attain typing speed of 40 words per minute (wpm) with no more than three errors on a five-minute timed writing test.

OBJECTIVES:

Analyze, classify, record and summarize data for or about an accounting system; use effective communication techniques in preparing business correspondence; use ten-key and full-keyboard adding machines, printing and electronic calculators; file cards; keypunch cards; attain a typing speed of 40 wpm (maximum of 3 errors on a 5 minute test) and type assignments accurately to specified standards.

GENERAL INSTRUCTIONS:

The Bookkeeper program is made up of curriculum components from curriculum area 24, Office Education. Each course and unit of the curriculum has a Learning Experience Guide (LEG) that gives directions about completing that component.

Before beginning any part of the program, a pretest is taken. This pretest covers concepts used in the complete job title and is used to determine which skills and knowledges the student has and which need to be learned.

Principal Author(s): L. Leland

After the pretest is completed and scored, a plan may be made that identifies the parts of the program one needs to successfully achieve the goal as an entry level Bookkeeper. The plan may also give the order in which the program parts are to be completed.

This program plan basically involves identifying the successfully completed or prevalidated units on the Student Progress Record (SPR). The student then has a record that specifically states what is completed and what remains to be accomplished in the job title program.

The general procedure for the Bookkeeper program is as follows:

1. Read the job title LEG for this program.
2. Take the job title pretests.
3. The order and number of courses taken at one time is generally flexible. It is recommended that the student make the choice of courses after considering the following:

   a. As the amount of time devoted daily to learning increases, the number of courses taken concurrently should also increase.
   b. The courses: 24.03, Ten-Key Adding Machine; 24.04, Printing Calculator and 24.05, Electronic Calculator are to be taken in the sequence listed.
   c. Course: 24.10, Keypunch should be delayed until the ten-key adding machine has been taken and typing skills have been acquired.
   d. Use of the adding machine or calculator will be helpful in course: 24.01 Accounting.
4. The student proceeds in each course, following the sequence of units within the course, until all required units are completed. Each course LEG describes the procedure for accomplishing the course. The SPR indicates the units and Learning Activity Packages (LAPs) the student is to complete in the course.
5. Continue the sequence of beginning and completing assigned courses until all courses in the job title program are completed.
6. Take the job title post test.
7. Demonstrate proficiency at specific office skills in a simulated Employment Testing Center on employment interview examination.

CURRICULUM COMPONENTS:

The curriculum components (courses, units and LAPs) for the Bookkeeper program are listed on the attached SPR.

RESOURCES:

A resource list is attached. This indicates books, films, etc., believed necessary for completing the job title program.

EVALUATION PROCEDURE:

Job title evaluation is by pre and post testing using a multiple-choice type of test and performance tests.

The test is used as a pretest to determine which units, if any, the student may be able to validate. The student is considered validated for a particular unit if 4 out of 5 items are correctly answered for each LAP part on the pretest (if that particular unit does not have a performance test requirement).

For those units with performance test requirements, the student must also satisfactorily complete the performance test to validate that unit. Unit performance test validation procedures are given in the "Evaluation Procedure" section of the unit LEG.

The job title test will also be taken by the student as a post test to determine any changes resulting from taking all or part of the job title program.

It should be understood that the course tests are used collectively as pre and post student evaluation instruments for the job title. In the Bookkeeper Program, it was found that commerically prepared tests were very applicable to most unit objectives. Because of this, extensive use is made of these commercially prepared tests.

A "Skill Maintenance" period is scheduled near the end of the spouse's stay in the program, for additional instruction, practice, and/or application of training to improve student's "employability" and confidence.

FOLLOW-THROUGH:

After reading the guide, take the job title pretests.

LEARNING ACTIVITY PACKAGES (LAP)

1. Author - This is the name of the person who has designed this particular LAP.

2. Curriculum Area - Automotive, Office Education, etc.

3. Course - Could be Job Title - General Mechanic, Rough In, Accident Prevention, Small engine Mechanic. There may be more than one course or job title for each instructional area.

4. Unit - There will be more than one unit for each course. Examples are: Fundamentals of Brake Systems, Excavation Layout, Concrete and Forms, Children's Safety, Appetizers, Letters of Appreciation.

5. Date - This is the date that the LAP was last revised.

6. Performance Activity - This is construed as being the title of the LAP, and is mainly a concise, brief, identification of the contents of the LAP.

7. Objective - Customarily used here are adaptations of Mager's first two objective components: TERMINAL BEHAVIOR (what the learner will be doing) and the important CONDITIONS under which the behavior will occur. Items 7 and 8 may sometimes be combined.

8. Evaluation Procedure - Two things: 1) The CRITERIA of acceptable performance (how well the learner will have to perform to be considered acceptable) and 2) what measurement devices are used to make this determination.

9. Resources - Texts, tools, materials, equipment, etc.

10. Procedure - These are the detailed steps a student takes in applying himself to the task of accomplishing whatever the above items assign to him.

Mountain-Plains Education & Economic Development Program, Inc.
Glasgow AFB, Montana 59231

File Code: _____

Date Published: _____

Learning Activity Package

Student: _____

Date: _____

PERFORMANCE ACTIVITY: This is the title of the LAP. It also identifies the main activity of the student in the LAP.

OBJECTIVE:

Tells student what the student is to do in the LAP. It describes the performance he should be able to produce if he has mastered the material.

Example: a. Select statements which best describe disassembly procedures for the four barrel carburetor.

b. Dissassemble a four barrel carburetor.

EVALUATION PROCEDURE:

Usually includes two things:

1. The criterion of acceptable performance on the measurement device.

2. The type or types of measurement devices to be used.

Additional pertinent information the student should know is included, as well as conditions under which the evaluation takes place. Examples: timed, tools to be used, etc.

EXAMPLE OF LAP-LEVEL EVALUATIONS:

1. 80% accuracy on a 10 item multiple-choice test without the use of references.
2. 80% accuracy = criterion.
3. 10 item multiple-choice test = type of instrument.
4. Without the use of references = conditions.

RESOURCES:

What the student needs to complete the requirement of the LAP. For instance, text, pages - to - Shop manuals, audio tapes, etc.

Principal Author(s):

PROCEDURE:

This section tells the student what steps to follow in completing the requirements of the LAP. How to utilize the resources and when to take the test.

KEY POINT: Sometimes the key point to be learned from the LAP materials are outlined here. This varies from LAP to LAP.

LAPs are designed to allow the student to be as nearly independent in his learning as possible. Therefore, they should be kept in a file with LAP tests easily accessible to the student.

DETAILED INSTRUCTOR ROLE IN STUDENT
PROGRESS THROUGH A UNIT

1. How to determine assignment to LAPs within the unit:
Steps:

1.1 Look at the prevalidation test data on the Student Progress Report (SPR).

1.2 Determine if the prevalidation test data is complete. If it is take step 1.9.

1.3 If it is not, determine if you are responsible for completing it. If you are, take step 1.5.

1.4 If you are not, notify the responsible section.

1.5 Administer and score tests.

1.6 Record results on SPR.

1.7 Review the test answer sheets for legibility and complete data.

1.8 Send test answer sheets and any other required data to a center location to be collected.

1.9 Determine if the student has prevalidated this unit. If so take step 1.20.

1.10 If not, assign the unit Learning Experience Guide (LEG) for student reading.

1.11 If the student wants to take the unit pretest, take step 1.14.

1.12 If the student does not want to take the unit pretest, determine if the student has prevalidated any Learning Activity Packages (LAPs) in this unit. If one or more LAPs were prevalidated, take step 1.19.

1.13 If no LAPs are prevalidated, assign the first LAP in the unit and begin step 2.1.

1.14 Administer and score unit pretest.

1.15 Record test scores on SPR.

1.16 Complete steps 1.17 and 1.18.

1.17 Determine if the student has validated the unit. If so, take step 1.20. If not, take step 1.12.

1.18 Take steps 1.7 and 1.8.

1.19 Assign the first nonvalidated LAP in the unit and begin step 2.1.

1.20 Determine if this is the last unit that the student takes in the course. If it is take step 1.21. If not, look at the next unit prevalidation test data (the student begins the next unit).

1.21 Determine if this unit is the last one that the student takes in your area. If it is, take step 1.22. If not, assign the course LEG for the next course that the student shall begin.

1.22 Follow the procedures required for a student that has just completed the planned program in your area.

2. Monitoring student progress and assisting the student in unit performance activities.

Steps:

2.1 Monitor the student progress and assist as needed.

2.2 Review results of LAP tests as students complete them and determine if the student validates the LAP. If so, take step 2.3. If not, direct the student to relevant parts of the LAP learning materials, take steps 1.7 and 1.8 and continue with step 2.1.

2.3 Determine if all LAP test questions were answered correctly. If they were, take step 2.4. If they were not, have the student find correct answers in the LAP learning materials, review the student's findings, take steps 1.7 and 1.8, and proceed to the next step.

2.4 Verify the student time spent in the LAP as recorded on the SPR (initial the appropriate column).

2.5 Determine if completing this LAP completes the unit. If it does, begin step 3.1. If not, assign the next nonvalidated LAP in the unit and continue with step 2.1.

3. Unit validation of the student.

Steps:

3.1 Administer the unit cognitive post test and determine if a unit performance test is required. If required, take step 3.7. If not, score the cognitive post test.

3.2 Determine if the student validated the unit post test. If so, take step 3.9. If not, take the next step.

3.3 Determine how many times the student has taken the unit post test. If once, take step 3.6. If twice, take step 3.5. If three times, take the next step.

3.4 Notify the student's advisor, take steps 1.7 and 1.8 and plan for a review of the problem.

3.5 Determine if you believe notification of the student's advisor or instructor is advisable. If so, take step 3.3. If not, take the next step.

3.6 Determine those LAPs to be retaken by the student, take steps 1.7, 1.8 and 1.19.

3.7 Without scoring the unit cognitive post test, administer the unit performance test and score it.

3.8 Determine if the student validated the unit performance test. If validated, take step 3.10. If not, score the unit cognitive test and continue at step 3.3.

3.9 Verify the student time spend in the unit as recorded on the SPR; record score on SPR; take steps 1.7 and 1.8, and continue at step 1.20.

3.10 There is the option of scoring the unit cognitive post test and proceeding to step 3.9 or going directly to step 3.9 without scoring the test.

STUDENT FLOW THROUGH

The mechanical details of getting the student through the process are simple, but there are some important rules the instructor needs to observe in order to make the system work. By way of brief review:

1. Keep in mind that the role of the instructor is that of a guidance and resource person, not a lecturer and a clerk. Students review their own materials, seek accessible resources and proceed independently. If the instructor finds himself shuffling papers and answering questions which are easily answered in resource material, he may not long appreciate the system. He should be encouraging, reinforcing, guiding and supporting students while giving them supplemental instructions not otherwise available.

2. Students should proceed from LAP to LAP without assistance. Unit testing indicates to the instructor how well they are proceeding.

3. The Student Progress Record should be filled out by the student, initialed by the instructor, and kept in a place accessible to both.

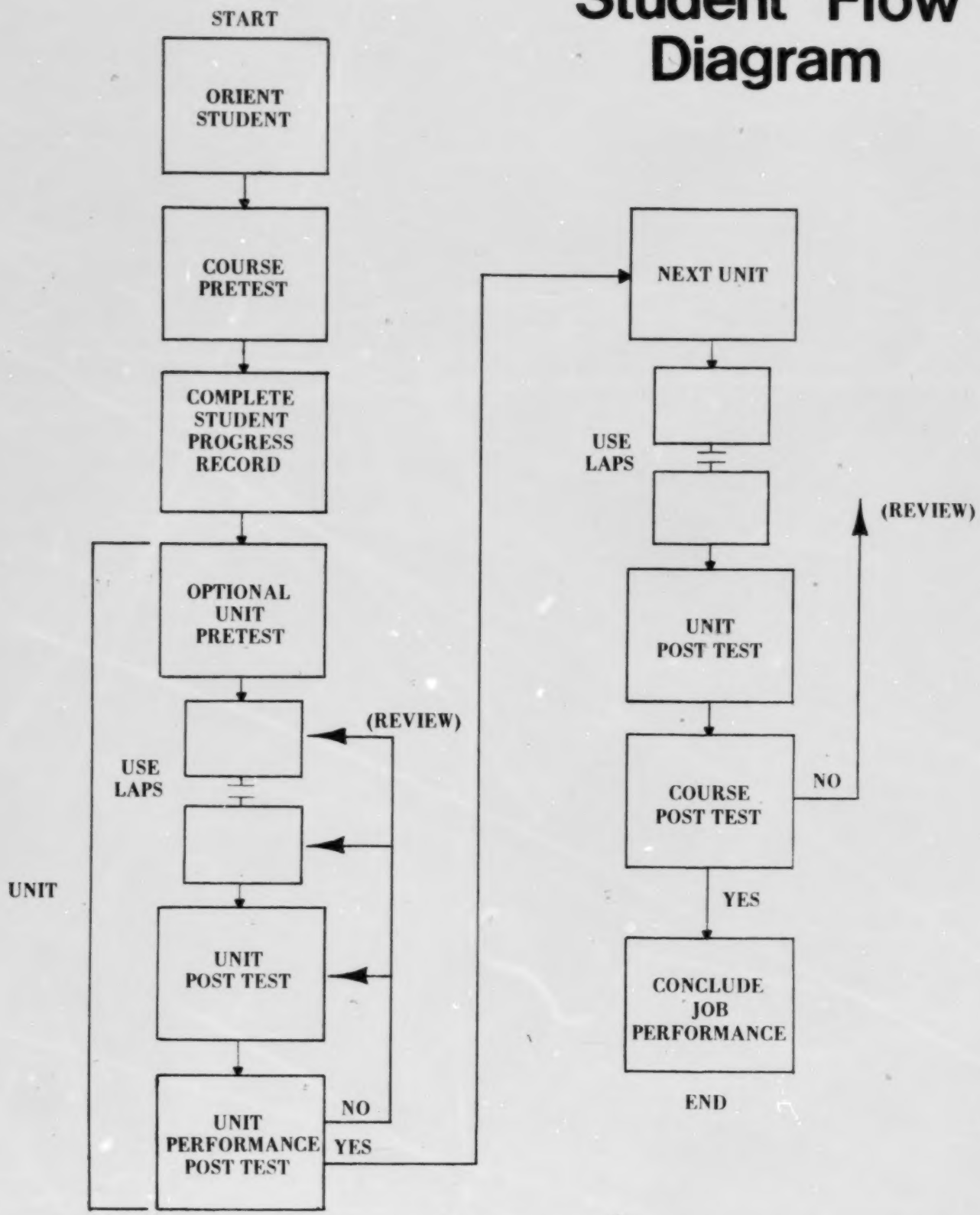
4. All tests except LAP tests should be kept separate from LAPs, LEGs, etc., yet accessible to students. Only instructors should have access to scoring keys in unit and course tests.

5. LAPs should be filed numerically, and be readily accessible to students unless they are bound.

6. LAPs, LEGs, and tests are expendable only to the extent that they deteriorate through use, and should be used until their appearance dictates replacement.

7. Test answer sheets are expendable and should be replaced after each time used.

Student Flow Diagram



GUIDELINES FOR INTERPRETING MOUNTAIN-PLAINS FILE CODE

In the upper right-hand corner of every printed Mountain-Plains curriculum product there appears a sequence of identification digits as, for example, 24.06.03.01.A2-0. This digital sequence identifies each of the various curriculum components and reflects the hierarchical nature of the Mountain-Plains curriculum.

The first two digits in sequence (24) are used as coded representation of the curriculum area; the second two digits (.06), the course; the third two digits (.03), and the fourth two digits (.01), the learning activity. These are followed by a letter and a digit (A2) which represent the version (A) and the edition(2). The final digit in the sequence (-0) is indicative of the type of curriculum product, e.g., 0= Learning Activity Package (LAP), 1 = Learning Experience Guide (LEG), 2 = cognitive test, 3 = resource, 4 = Group Activity Package (GAP), and 5 = performance test.

Curriculum Area (Office Education)	Course (Data Processing)	Unit (Punched-Card Data Processing)	Learning Activity (The Punched Card)	Version Edition (2nd)	Type of Curriculum Product (LAP)
24	.06	.03	.01	A-2	-0

The particular curriculum component becomes more readily identifiable when the sequence is scanned for zeros. For example, a glance at the file code 24.06.00.00.A2-2 reveals that the first two sets of digits go only to the course level, and the last digit of the code indicates a cognitive test, so this specific product is a course (.06) cognitive test (-2) in curriculum area 24. In the same manner, the file code 24,06.03.00.A2-5 indicates a unit (.03) performance test (-5) in course .06 of curriculum area 24. The learning activity level, the fourth set of two digits, appears in the above illustration in which the code identifies the product from curriculum area 24 as a LAP, version A, second edition, the first learning activity in the third unit of course six.

USE OF TESTS

All cognitive tests in use in the instructional areas are not disposable materials. They should be re-used until such time that, due to wear and tear, they are no longer readable. Separate answer sheets have been provided for all tests; when taking a test, students are expected to use these answer sheets. On the answer sheet are spaces for the student to enter the test file code number and his/her name. The instructor audits all answer sheets to make sure that this information has been filled in.

LAP Tests

The LAP test is to be taken by the student when he or she feels that he has completed the work for that LAP. The test is self-administering and self-scoring. After completing the test, the student should go back into the curriculum and find the answers to any items he may have missed. The student should not alter his original responses to each item. If in correcting the test, he writes the correct answer next to his response, his original response should still be clearly distinguishable.

LAP Progress Test

In those instances where there is not a LAP test for each LAP, there are LAP progress tests covering two or more LAPs. These tests should be taken after the student completes the final LAP covered by the test. Aside from this, they are used exactly like LAP tests.

Unit Pretests

These tests are to be administered only at the students request. If a student feels that he can accomplish the object for a given unit without going through the curriculum, he may request to take the unit pretest. If he passes the unit pretest with a minimum score of 4 out of 5 per LAP, he may be administered the performance test at that point. If he fails the unit pretest, he should be directed into the curriculum sequence until he is ready for the normal unit post/performance test procedure. When administering a unit pretest, please be sure to write PRETEST across the top of the answer sheet. All unit test answer sheets will be assumed to be post tests unless so marked.

Unit Post Tests

When a student feels that he has mastered the unit and is ready to take the performance test for that unit, he should be administered the unit post test at the same time as the performance test. The unit post test SHOULD NOT be scored before the performance test.

Unit/LAP Tests

In those units that do not have LAP tests, the unit post test has been designated as a unit/LAP test. Unit/LAP tests are used in the same manner as the unit post tests.

Course/Unit Tests

In those courses that only have one unit, the tests have been designated as course/unit tests. In the instructional areas they are used in the same manner as unit post tests.

Performance Tests

The performance test will be administered at the end of the unit when the student feels that he is ready to complete it. At the time the test is given, the assignment section should be filled in describing the exact task the student was expected to complete. The performance test is administered and scored before the unit test results are obtained.

STUDENT VALIDATION

Units Without Performance Tests

In those curriculum units that do not have performance tests, the cognitive test is used to validate students into the next unit. The recommended criteria for student validation under these circumstances is that the student obtain a minimum score of 4 out of 5 items for each LAP covered by the unit test. If a student obtains a score below the recommended criterion level, he should be directed back into those portions of the curriculum in which he did poorly. He is then re-tested and the answer sheet should have SECOND TESTING written across the top of it. If a student fails the test a second time, the instructor has two options.

1. He can redirect the student back into the curriculum and retest him a third time. If after the third testing the student still has not achieved a satisfactory level of performance, the student's instructor or advisor must be notified. At this point in time, some remedial action should take place.

2. If the instructor feels that nothing is to be accomplished by redirecting the student back into the curriculum, the student advisor or instructor should be notified. As in option number 1, a plan must be formulated to deal with whatever problems are retarding the student's progress.

If the student passes the test, nothing more is necessary than to enter the results on the SPR and discuss the results with the student, giving him an opportunity to review the items he has missed.

Units With Performance Tests

In units with performance tests, student validation is accomplished through satisfactory completion of the performance test. If the student passes the performance test, he will then proceed to the next unit regardless of his written test performance.

If a student fails the performance test, the written test and the performance test are reviewed by the student and the instructor in a conference situation. This is so the instructor can use the test results to diagnose student problem areas. The student will then be redirected back into the curriculum to correct his deficiencies in these problem areas. When the student feels that he is ready to retake the performance test, he is readministered both the written and performance test. If he fails the performance test a second time, the student advisor or instructor should be notified so that some action can be taken to uncover the reasons for poor student performance and corrective action is taken.

DISPOSITION OF TEST RESULTS

All cognitive test answer sheets should be kept together and stored for further disposition. These answer sheets should be audited by the instructional staff to make sure that they have the correct file codes, student ID number, etc., filled out on them. Unit test answer sheets should be stapled to the performance test that was administered concurrently with it.

AUDITING

As one of its functions, the Technical Support Division offers instruction on how to manage the Mountain-Plains System, and periodically audits each instructional area to ensure adherance to the system. Where discrepancies are noted, additional assistance is provided as appropriate.

A special monitoring form is used in conjunction with other less formal methods of student and staff observation. This form, commonly termed the CD-2, is included in this Guide and may be used as a guide to follow while using the system.

Mountain-Plains Education & Economic Development Program, Inc.

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MOUNTAIN-PLAINS CURRICULUM MONITORING FORM CD-2

January, 1976

Teacher_____ Trial Site #_____

Date_____ Grade Level_____ CA #_____ Other_____

QUESTIONS	RESPONSES	
	Adequate	Questionable
1. Are raw test scores logged on SPRs? Criterion: At Mountain-Plains, job title level pre and post test scores are entered by the Test Center. Unit post and performance test scores are entered by the instructor. LAP test scores are entered by the student on answer sheets. Job title post test scores are entered on the SWP by the Test Center.		
2. Are prevalidation procedures being followed? Criteria: a. SPRs contain prevalidation entry marks. (Which at Mountain-Plains match those on SWPs.)	a.	
b. No students are found involuntarily using LAPs that are marked on SPR as having been prevalidated. (Students may work in prevalidated LAPs when this is review following failure on performance test.)	b.	
3. Are students using LEGs? Criterion: Selected students can describe a LEG and report that they are using them.		
4. Are students using LAPs? Criterion: Randomly selected students can relate their activities to a procedure on a specific LAP.		
5. Are students using LAPs as prescribed? Criterion: Students are observed to proceed from one LAP to the next without instructor interaction, except where by necessity student tasks are not ordered the same as LAPs.		

MOUNTAIN-PLAINS CURRICULUM MONITORING FORM CD-2

QUESTIONS		RESPONSES Adequate	Questionable
6. Does instructor-student interaction conform to Mountain-Plains curriculum design? Criterion: Students are observed to be working independently of instructor-organized large groups.			
7. Is instructor available as a resource person? Criterion: Randomly selected students report instructor is available to help them when needed within a reasonable length of time.			
8. Are LAP tests properly used? Criterion: Observation and/or student report indicates students are taking and scoring LAP tests themselves.			
9. Are Unit tests properly used? Criteria: a. All observed instances show performance tests administered before scoring of written tests. b. All observed instances indicate that instructor is conducting both cognitive and performance tests in a manner which compels students to respond to test items without benefit of external information other than that prescribed by testing constraints.	a.		
	b.		
10. Is test data being properly collected? Criteria: a. Written Unit test answer sheets attached to performance tests. b. Both tests given at the same time. c. LAP test answer sheets properly stored. d. Course test answer sheets properly labeled as to pre and post. e. All answer sheets collected and stored. f. Answer sheets contain required information.	a.		
	b.		
	c.		
	d.		
	e.		
	f.		
11. Is the instructor observing all the guidelines for use of the SWP? (SWP is used at M-P only.) Criteria: a. Data is recorded as a LAP (or unit if this is the smallest component required of that job title) is completed. b. All information required by the form is entered in appropriate spaces.	a.		
	b.		

MOUNTAIN-PLAINS CURRICULUM MONITORING FORM CD-2

QUESTIONS	RESPONSES	
	Adequate	Questionable
12. Is the Student Progress Record being used as designed? Criteria: a. Students or instructional staff fill out identifying information completely, accurately and neatly. b. Students fill in the first three columns as required. c. Instructor initials the appropriate column at the termination of a learning segment, indicating accurate and timely conformity to instructions by students.	a.	
	b.	
	c.	
13. Are Curriculum Materials appropriately stored and used by students? Criterion: LAPs, LEGs and resource materials are kept in a place which is accessible to students.		
14. User trial data is properly collected? Criteria: a. Each CD-5 is keyed to the LAP, i.e., the complete file code number is listed on the CD-5. b. These are stored or sent to collection point as indicated.	a.	
	b.	